

METHODS AND SYSTEMS FOR PERFORMING INTEGRATED ANALYSES,
SUCH AS INTEGRATED ANALYSES FOR GAS TURBINE POWER PLANTS

ABSTRACT OF THE DISCLOSURE

Automated systems for performing integrated analyses. In one embodiment, an integrated analysis system can be used to comprehensively evaluate the effects of changes in hardware configuration or operating conditions on gas turbine power plant performance and economics. The system evaluates these changes by concurrently analyzing a number of different aspects of the power plant while ensuring that the data used in each of the different analyses is consistent. These analyses can include turbine and compressor aerodynamic analysis, cooling and leakage flow analysis, heat transfer analysis, part life analysis, heat balance analysis, cost analysis and overall power plant performance and economic analysis.